



Our Solution
Project profile

Realisation of a logistic concept
with the automated guided vehicle TransCar LTC2

The system ...

Start-up:	2003
System:	TransCar LTC2
Track length:	550 m
No. of stations:	54
No. of vehicles:	6
Control:	Computer controlled
Goods transported:	Linen, food, waste, drugs

The customer ...

The faculty of medicine of the University of Leipzig is one of the biggest in eastern Germany. Its history goes back into the early 15th century. Since 1999 the faculty contains 29 clinics, 3 independent departments and 3 clinical institutes all integrated in the same public legal entity. Based on these new structures the University of Leipzig intended to centralise several functions and organisational units of the surgery clinics in a new building called OKL.

... .. and its initial situation

The hospital of the University of Leipzig was gradually optimising the logistic processes of the formerly 35 independent clinics. Uncommon and innovative concepts have always been supported by the hospital management. Further optimisation have been addressed in the field of in-house transport logistics like the transport of linen, food, or medical goods. Therefore the hospital was looking for solutions.



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Leipzig

At a glance

Requirements

- Cost reduction in the field of internal logistics processes
- Daily transport distance approx. 67 km
- Transport quantity in the OKL of about 322 transports a day to 20 wards, operation theatre, centralised sterilisation, and centre of distribution

Procedure

- Evaluation of needed numbers of vehicles (6 pieces)
- Determination of number of container buffer sites (35)

Future plans

- Expansion of AGV system by connecting the paediatric clinic and the gynaecological clinic to the main system as from 2008
- Direct connection of kitchen and warehouse as from 2008

Procedure

During the phase of planning the complex and resource intensive transport processes have been analysed. The results were compared to several alternative solutions. Positive side effect of the analysis was the coherent record of all transport processes including flow of commodity, amount of transports etc. within the relevant organisational units.

The final optimised and shortened processes were modelled based on the insights. Due to the change in the transport processes a just-in-time delivery is possible. The necessary storage of goods can clearly be reduced. All over the quality of the logistics can be increased.

Requirements

Easy handling - high flexibility

The AGV system must ensure an automated transport of special containers for food, linen, waste, drugs, and sterile goods. The containers must be lifted. Further success factors for the system were: Easy addressing of the containers by the insertion of transponder cards, easy handling of containers at the wards, no programming or input necessary

on a keypad when sending a container. The system provides very high flexibility. A possible change of the driving route or of time schedule can easily be realised supported by the on-board laser navigation system.

Project success

Most of the manual transports of containers could be replaced by the transport with the AGV. This resulted in a significant decrease of personal resources doing manual transports. Up to 322 containers are daily carried by 6 AGVs. Each container can weight up to 400 kg.

The AGV delivers goods between 6.00 am. and 8.00 pm to the following departments of the OKL: centralised sterilisation, centre of distribution, operation theatre, 20 wards. The departments are located on 6 different floors. Total daily transport distance is approx. 67 km.

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